

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1-6 (Canceled)
7. (Currently Amended) A method for producing a construct by seamlessly joining solid objects made up of certain sized particles, the method comprising:
 - a) supplying a joint compound having particle sizes smaller than the certain sized particles;
 - b) applying the joining compound to opposing surfaces of the objects to be joined together;
 - c) heating the joint to a heating temperature of between 1000 °C and 1350 °C below the melting point of a lowest melting point constituent of the construct; and
 - d) applying pressure to the objects so as to direct the opposing surfaces toward each other, whereby the joint compound is intermediate the opposing surfaces, wherein the joint compound is applied to a thickness that is at least five times the dimension of the largest particles contained in the joint compound and wherein superplastic deformation occurs between the objects and the joint compound.
8. (Previously Presented) The method as recited in claim 7 wherein the heating temperature is 0.5 to 0.7 the melting temperature of the lowest melting point constituent of the construct.
9. (Previously Presented) The method as recited in claim 7 wherein the applied pressure and heating temperature are applied at an inverse relationship to each other.

10. (Previously Presented) The method as recited in claim 7 wherein the solid objects are comprised of multiphase materials selected from the group consisting of ceramics, glass ceramics, intermetallic compounds, metals, and combinations thereof.

11. (Previously Presented) The method as recited in claim 7 wherein the solid objects are two-phase bodies and wherein the volume percent of one phase to the other phase varies from 2 to 98.

12. (Original) The method as recited in claim 7 wherein the objects are two-phase bodies and wherein the volume percent of one phase to the other phase varies from 2 to 98.

13. (Currently Amended) The method as recited in claim 7 wherein the joint compound is applied to a thickness that is between at least five and 500 times the dimension of the largest particles contained in the joint compound.

14-24. (Canceled)

25. (Previously Presented) The method as recited in claim 7 wherein the construct is heated to approximately 50-60 percent of the melting temperature of the lowest melting temperature constituent.

26. (Currently Amended) The method as recited in claim 7 wherein a constituent of the joint compound or the objects comprise 65 percent or more by volume of a phase that exhibits superplastic flow at the heating temperature, and wherein the largest particle of the phase are no more than 10 mm.

27. (New) The method as recited in claim 7 wherein up to 35 volume percent of

the joint compound contains fibers as long as 500 microns and 65 volume percent of the joint compound comprises a phase that exhibits superplastic flow at the heating temperature and wherein the largest particles of the phase are no more than 5 microns.

28. (New) A method for producing a construct by seamlessly joining solid objects made up of certain sized particles, the method comprising:

- a) supplying a joint compound having particle sizes smaller than the certain sized particles;
- b) applying the joining compound to opposing surfaces of the objects to be joined together;
- c) heating the joint to a heating temperature of less than 1450 °C and
- d) applying pressure to the objects so as to direct the opposing surfaces toward each other, whereby the joint compound is intermediate the opposing surfaces, wherein the joint compound is applied to a thickness that is at least five times the dimension of the largest particles contained in the joint compound and wherein superplastic deformation occurs between the objects and the joint compound.

29. (New) The method as recited in claim 28 whereby the temperature is 1000 °C.

30. (New) The method as recited in claim 28 whereby the temperature is 1350 °C.